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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/542,916 | 07/20/2005 | Patrick Colin Hickey | RGC-LUX-PI | 9549 |

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| EXAMINER |
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GAGLIARDI, ALBERT J

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| ART UNIT | PAPER NUMBER |
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2884

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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| 3 MONTHS | 02/08/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/542,916

Applicant(s)

HICKEY, PATRICK COLIN

Examiner

Albert J. Gagliardi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 7/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Comment on Submissions

1. This Office Action is responsive to submissions of 4 January 2006.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9 and 10 and 15 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are the types of optical instruments being calibrated.

The examiner notes that it has been held that a claim may be rendered indefinite by reference to an object that is variable. See MPEP 2173.05(b). In this case, those skilled in the art appreciate that optical instruments come in a wide variety of types, configurations, and sizes, and that with no specific identification of the optical instrument being recited, the size and shapes of the light sources for which patent protection is being sought is unclear.

Claim 10 is rejected on the basis of its dependency. It is noted that with the recitation of such a wide variety of instruments, the size and shape of the device is still unclear.

Regarding claim 15, the claims lacks antecedent basis since claim 12 is not a "kit." It is assumed claim 12 is dependent on claim 13.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Frank (DE 3816489 A1).

Regarding claim 1, *Frank* discloses (Fig. 1) a luminescent device comprising a gaseous tritium light source (GTLS) (100) which provides a light output of pre-determinable intensity.

Note: As disclosed in the English language abstract, the light source is designed for use as a standard light source for the calibration of optical instruments. Those skilled in the art appreciate that an inherent aspect of such sources is that the output a pre-determinable light intensity output.

Regarding claim 9, as best understood, the device disclosed by *Frank* is inherently sized and shaped to calibrate the output of optical instruments in view of its disclosed use.

Regarding claim 10, *Frank* discloses that the apparatus to be calibrate may include at least spectrophotometers or photomultipliers (see English language abstract).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Frank*.

Regarding claim 2, although *Frank* does not specifically disclose the amount of tritium gas, those skilled in the art appreciate that the particular amount of tritium gas within the light source is a well known as a result effective variable that affects the predetermined light output intensity. As such, absent some degree of criticality, the recitation of a particular amount/concentration of tritium, such as 10-20 mCi, would have been an obvious design choice within the skill of a person of ordinary skill in the art depending on the need of the particular application and the desired light intensity output. See MPEP 2144.05 II.

Regarding claims 16 and 17, *Frank* suggests the use of the light source in a variety of optical measuring apparatus (see generally English language abstract) including at least a spectrophotometer and a photomultiplier. Those skilled in the art appreciate that, depending on the needs of the application, it is routine to place such sources in a sample holder and, as such, it would have been obvious to arrange the light source in a sample holder of the light measuring device.

8. Claims 3, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Frank* as applied above, and further in view of Bingle *et al.* (US 6,390,529).

Regarding claim 3, *Frank* further discloses a casing (Halterung 9b). Configuration of the holder as including a transparent or translucent portion would have been obvious in view of the necessity of such casing to allow for the transmission of light. The examiner additionally notes that the inclusion of protective casing would additionally been obvious in order to allow for protection of the glass enclosure.

Regarding claim 6, the use of transparent or translucent portions formed from glass or plastic are well-known and would have been routine in the art.

Regarding claim 8, in the apparatus suggested by *Frank* as applied above, *Frank* suggests the GTLS is within a housing (101) located within a casing (9b). Regardless, the inclusion of a protective casing would have been obvious to allow for additional protection of the glass tube.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Frank* as applied above, and further in view of *Linhart et al.* (US 3,566,125).

Regarding claim 4, regarding the particular gas encapsulation scheme as including a steel casing, although not disclosed by *Frank*, a wide variety of gaseous light source encapsulation schemes are well known in the art (see for example *Linhart* at Figs 2) including a variation including a metal housing (24) with a transparent window (21). One skilled in the art appreciate that depending on the needs of the application, such encapsulation allows for high strength and reduce breakage than a simple glass encapsulation scheme. Absent some degree of criticality, the particular metal of the housing, such as steel (a well-known strong and readily available metal) would have been a matter of routine design choice depending on the needs of the application.

10. Claims 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Frank* as applied above, and further in view of *Adams et al.* ((US 6,549,279).

Regarding claim 5, the use of filters, including neutral density filters in conjunction with standard light sources used for calibration purposes is routine in the art (see for example *Adams* at col. 8, lines 44-60) and would have been an obvious design choice to allow for a source with uniform light output over a broad spectral range.

Regarding claim 12, *Adams* discloses the use of a plurality of filters (col. 8, lines 54-55). Arranging such filters in an array is considered routine in the art.

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Frank* as applied above, and further in view of *Bingle et al.* (US 6,390,529).

Regarding the including of coloring means, although not specifically disclosed by *Frank*, *Bingle* discloses that GTLS device are generally available in any of a variety of sizes, shapes, and colors (col. 10, lines 26-32). In addition, those skilled in the art appreciate that wavelength (i.e., color) specific calibration of optical instruments is routine and, as such, it would have been obvious to include coloring means (obvious aspect of color specific GTLS device) so as to allow for a light standard of the desired color.

12. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Frank* as applied above, and further in view of *Remer et al.* (US 5,453,829).

Regarding the inclusion of a scale bar or graticule, coloring means, although not specifically disclosed by *Frank*, *Remer* discloses (Fig. 4) that the use of devices such as graticules (7) are routine in the art for use in optical instruments including a light source, and absent some degree of criticality, the inclusion of a scalebar or graticule would have been an obvious design choice depending on the needs of the application so as to allow for a means to determine position/size in an easier and more accurate manner.

13. Claims 13, 14 and 15 (as best understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over *Frank* as applied above, and further in view of *Leveille* (US 2002/0096667).

Regarding claim 13, calibration light kits including calibration sources are typical in the art for use in the calibration of optical instruments (see for example *Leveille* at par. [0009]). As

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such, it would have been obvious to package the one or more of the light sources disclosed by *Frank* into a calibration light kit so as to allow for a more useful embodiment of the device.

Regarding claims 14 and 15 (as best understood), depending on the particular optical instrument to be calibrated, the choice of the number of light sources and the appropriate handling tools would have been a matter of routine design choice.

14. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Frank* as applied above, and further in view of *Valenta* (US 5,321,261).

Regarding claims 18-19, *Valenta* discloses a normalization technique for an optical measuring device wherein multiple samples are arranged in a sample microplate (10) and includes a calibration of the apparatus using self-luminous calibration light standards (S6, S18, etc.). Those skilled in the art appreciate that such measuring systems utilizing microplates typically are used for samples comprising living cells. Absent some degree of criticality, it would have been obvious to modify the method disclosed by *Valenta* to utilize functionally equivalent and simpler light standard as disclosed by *Frank* in the calibration in order to allow a normalization routine with a standard light source of simpler construction.

Conclusion


15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert J. Gagliardi whose telephone number is (571) 272-2436. The examiner can normally be reached on Monday thru Friday from 10 AM to 6 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Albert J. Gagliardi
Primary Examiner
Art Unit 2884

AJG